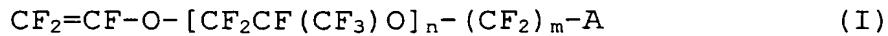


CLAIMS

1. A method for producing a fluorocopolymer
 which comprises a polymerization reaction of a
 5 fluorine-containing ethylenic monomer with at least one
 fluorovinyl ether derivative represented by the following
 general formula (I):

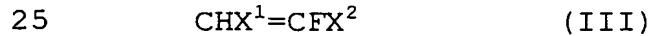


(wherein n represents an integer of 0 to 3, m represents an
 10 integer of 1 to 5, and A represents $-SO_2X$ or $-COOY$; X represents
 a halogen atom or $-NR^1R^2$; R^1 and R^2 are the same or different
 and each represents a hydrogen atom, an alkali metal, an alkyl
 group or a sulfonyl-containing group and Y represents a hydrogen
 atom or an alkyl group having 1 to 4 carbon atoms) to give a
 15 fluorocopolymer,

 said fluorine-containing ethylenic monomer being a
 perhaloethylenic monomer represented by the following general
 formula (II):



20 (wherein R_f^1 represents a fluorine atom, a chlorine atom, R_f^2
 or OR_f^2 ; R_f^2 represents a straight or branched perfluoroalkyl
 group having 1 to 9 carbon atoms, which may have an ether oxygen
 atom(s)) and/or a hydrogen-containing fluoroethylenic monomer
 represented by the following general formula (III):



25 (wherein X^1 represents a hydrogen atom or a fluorine atom and
 X^2 represents a hydrogen atom, a fluorine atom, a chlorine atom,
 R_f^3 or OR_f^3 ; R_f^3 represents a straight or branched perfluoroalkyl
 group having 1 to 9 carbon atoms, which may have an ether oxygen
 30 atom(s)) and

 said polymerization reaction being carried out in a
 saturated perfluorohydrocarbon while additional feeding of
 said fluorine-containing ethylenic monomer and said
 fluorovinyl ether derivative being carried out.

2. The method for producing a fluorocopolymer according to Claim 1,

wherein the polymerization reaction brings a mass of the fluorocopolymer relative to a volume of a polymerization solution to arrive at 30 g/L or a higher level.

3. The method for producing a fluorocopolymer according to Claim 1 or 2,

wherein the saturated perfluorohydrocarbon has 20 or less than 20 carbon atoms and has a cyclic structure or linear structure each optionally with a branched structure.

4. The method for producing a fluorocopolymer according to Claim 1,

wherein the saturated perfluorohydrocarbon is a perfluorohexane or a perfluorocyclobutane.

5. The method for producing a fluorocopolymer according to Claim 1, 2, 3 or 4,

wherein the fluorine-containing ethylenic monomer is $\text{CF}_2=\text{CF}_2$, n is 0 (zero), m is 2 and A is $-\text{SO}_2\text{F}$.

6. A fluorocopolymer produced by the method for producing a fluorocopolymer according to Claim 1, 2, 3, 4 or 5.

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7. The fluorocopolymer according to Claim 6 which satisfies the following relations (a) and (b):

$$0 \leq \Delta H \leq 6.375 - 0.475C \quad (5 \leq C \leq 13) \quad (a)$$

$$0 \leq \Delta H \leq 0.2 \quad (13 < C \leq 18) \quad (b)$$

30 where ΔH is a heat of fusion (in J/g) as appearing at 315 to 325°C upon measurement with a differential scanning calorimeter and C is a fluorovinyl ether derivative unit content (in mole percent) in the fluorocopolymer.

35 8. A molded article formed from the fluorocopolymer

according to Claim 6 or 7.

9. The molded article according to Claim 8,
which forms a membrane.

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10. A solid polyelectrolyte fuel cell comprising the
molded article according to Claim 8 or 9.